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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/493,496      | 01/28/2000  | Adam L. Cohen        | 06666/010005/2613   | 2322             |

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04/25/2002

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EXAMINER

SMITH HICKS, ERICA D

ART UNIT

1741

PAPER NUMBER

16

DATE MAILED: 04/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

7-2-16

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 09/493,496             |  | COHEN, ADAM L.      |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Erica Smith-Hicks      |  | 1741                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-14 is/are pending in the application.
- 4a) Of the above claim(s) 3-6 and 10-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
     If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
     \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
     a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s). <u>15</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                 |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>14</u> . | 6) <input type="checkbox"/> Other: _____  |

|                          |                        |                     |  |
|--------------------------|------------------------|---------------------|--|
| <b>Interview Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                          | 09/493,496             | COHEN, ADAM L.      |  |
|                          | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                          | Erica Smith-Hicks      | 1741                |  |

All participants (applicant, applicant's representative, PTO personnel):

(1) Erica Smith-Hicks. (3) \_\_\_\_\_.

(2) Atty. Norman Klivans. (4) \_\_\_\_\_.

Date of Interview: 4/8, 18, 19/2002.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: N/A.

Identification of prior art discussed: N/A.

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's representative was called to discuss the attached restriction requirement. The Examiner also discussed the art based rejections of the pending claims; copending Applications 09/488,142 and 09/487408 to further distinguish the instant claims thereover.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

i) ☒ It is not necessary for applicant to provide a separate record of the substance of the interview (if box is checked).

Unless the paragraph above has been checked, THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

### **DETAILED ACTION**

1. This Office Action is in response to Applicant's amendment filed January 25, 2002. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. Claims 3-14 are pending with claims 8-14 newly added.

### ***Election/Restrictions***

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 3-6 and 10-14, drawn to a method for forming a mask, said method comprising etching classified in class 427, subclass 264.
- II. Claims 7-9, drawn to a method for forming a mask, said method comprising exposing the mask to UV light, creating ablation effect, classified in class 427, subclass 272.

3. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions provide for different modes of operation as the coating material of Group I is removed by an etching technique while the coating of Group II is removed by UV light exposure.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. During a telephone conversation with Atty. Norman Klivans on April 18, 2002 a provisional election was made with traverse to prosecute the invention of Group II, claims 7-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 3-6 and 8-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

***Claim Rejections - 35 USC § 103***

6. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over JOLLY et al. US 5,395,508 and ARNDT et al., US 5,766,441.

JOLLY et al. disclose a supported mask for use in an electroplating technique wherein the said mask is patterned and aligned against a substrate surface (col. 3, lines 3-15). The mask is formed by depositing an insulating material onto a support and patterned as desired (col. 4, lines 10-25).

JOLLY et al. fails to expressly teach developing technique for establishing the pattern on the mask.

ARNDT et al. disclose a mask forming process whereby the pattern is developed through deposition of a photoresist, development thereof by UV light (thus disclosing the limitations of instant claim 8) and laser ablation for explosively removing material from

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the mask to thereby structure the mask (limitations of claim 9) at col. 11, lines 1-15 of the reference and shown in Figure 16.

JOLLY et al. and ARNDT et al. in combination, teach all of the limitations of the instant rejected claims 7-9 and are combinable as they are both from the same technology area of fabricating and employing mask in electrochemical techniques.

It would have been obvious to a person of skill at the time of the invention to have employed the structuring technique taught by ARNDT et al. for the mask of JOLLY et al. because ARNDT et al. have shown that the removal of excess material by ablation would have significantly increased the tolerance control of the pattern structures of the mask, absent evidence to the contrary.

### ***Response to Amendment***

7. Claim 7 was rejected under 35 U.S.C. 102(b) as being anticipated by TRUEBA, US 5,560,837.

The rejection has been **withdrawn** in view of Applicant's arguments and a new grounds for rejection has been made.

### ***Double Patenting***

8. Claims 3-6 were rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 10 and 11 of U.S. Patent No. US 6027630. The rejection has been withdrawn, claims 3-6 being withdrawn from consideration as an Invention non-elected with traverse in Paper No. 15.

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9. The Specification has been amended per Applicant's request.
10. The claims have been amended per Applicant's request.

***Response to Arguments***

11. Applicant's arguments with respect to claim 7 have been considered but are moot in view of the new ground(s) of rejection.

However, the Examiner particularly agrees with Applicant's argument that TRUEBA, US 5,560,837 fails to teach a laser ablation technique for structuring the mask.

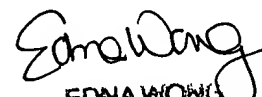
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica Smith-Hicks whose telephone number is 703/ 305-7645. The examiner can normally be reached on Wed.-Fri. from 7:30 a.m.-6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 703/ 308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are 703/ 872-9311 for regular communications and 703/ 872-9310 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703/ 308-0661.

Erica Smith-Hicks  
Examiner  
Art Unit 1741

ESH  
April 22, 2002

  
EDNA WONG  
PRIMARY EXAMINER  
TC700